APPENDIX 8

Monitoring Well 128 (MW128) Preliminary Results

MONITORING WELL 128 (MW128) PRELIMINARY RESULTS

INTRODUCTION

This monitoring well cluster location was chosen because it is located in the eastern portion of the Muscoy Plume OU investigation area in the vicinity of a bedrock low (identified in recently completed seismic studies). This location was also chosen because it is near the eastern boundary of the Muscoy plume.

MONITORING WELL CLUSTER MW128 DESIGN

Monitoring well cluster MW128 was drilled and installed between October 25 and November 9, 1994. The MW128 borehole was drilled approximately 450 feet north of the intersection of Highland and Western Avenues. The well borehole was drilled to a total depth of 990 feet below ground surface (bgs). The monitoring well cluster was constructed using three individual well casing strings with one, 30 foot long screen interval for each completion. The three casings were designated as MW128A, MW128B, and MW128C and were screened from 410 to 440 feet, 690 to 720 feet, and 860 to 890 feet bgs, respectively.

GENERAL LITHOLOGY

Drilling and resistivity logs indicated lithology in the immediate vicinity of well MW128 was generally finer-grained than lithology encountered in boreholes drilled in the adjoining areas of the San Bernardino area. Intermittent gravels, sandy silt, and clayey silt were encountered between ground surface and approximately 400 feet bgs. Well MW128A was completed in a gravelly sand which was observed between 420 feet to 470 feet bgs. This coarse grained material was underlain by alternating layers of gravelly sands, silts, and clays. Well MW128B was screened in a gravelly sand unit between 700 feet to 722 feet bgs. A prevalent clay and silty clay unit was encountered from 722 feet to 840 feet bgs. Well MW128C was screened in a sand unit which was observed from 880 feet to 890 feet bgs. The remaining portion of the borehole was completed in alternating sandy clay and gravelly clay above a silty clay unit that contained lithic fragments, indicating that the borehole has approached bedrock. Lithologic colors were dark gray, brown, and olive brown.

When preliminary lithological data from MW128 were compared to historic lithological data from production wells, it appeared that the sediments in the vicinity of MW128 were generally finer grained and contained more fines (silts and clays). Aquifer hydraulic conductivities and groundwater velocities may be lower here than those in other parts of the basin as well. Because of this heterogeneity, it is assumed that actual flow of groundwater (and its dissolved phase VOCs) within specific areas will flow somewhat differently than the MODFLOW model predicts, although the overall (large scale) modeled flow should still be valid.

SAMPLING RESULTS

Immediately after well construction and development, samples were collected from the three wells and analyzed on a 48 hour turn-around-time basis for VOCs using EPA Methods 8020 and 8021. Results of the preliminary invalidated analyses and the respective screened intervals are presented below.

Well ID	Screen Interval (ft, bgs)	TCE	PCE	Freon
MW128A	410-440	5.2	11.0	3.1
MW128B	690-720	<1.0	<1.0	<2.0
MW128C	860-890	<1.0	<1.0	<2.0

These preliminary data indicate that the contaminants appear to be present in the upper portion of the aquifer, above 690 feet bgs. The presence of contaminants in the upper portion of the aquifer is further supported by sample results from the unused municipal water supply well MUNI-106 (Gardena well) which is screened at the following intervals in feet bgs: 135-182; 197-250; 306-336; 370-400. Well MUNI-106 recorded the highest level of PCE (27 $\mu g/\ell$) during the Muscoy Interim Sampling event. This well is located approximately 1,800 feet west of well MW128. The wells are scheduled to be sampled again in mid-December. These data will be validated and presented in a future report.